



Problem of the Week

Problem E

Extra Support

A container for bird seed is built in the shape of a trapezoidal prism. That is, the container is a prism in which opposite parallel ends are congruent trapezoids. The opposite parallel sides of each trapezoid are 18 cm and 8 cm. The non-parallel sides of each trapezoid are 8 cm and 6 cm. The container is 20 cm long. The container has volume 1248 cm^3 . The measurements are shown on the diagram.

In order to make the container stronger, a cable is attached from the top left corner of the front trapezoid to the bottom right corner of the trapezoid on the back end, as shown with the red line segment.

Determine the length of the cable, in centimetres, to the nearest tenth.

